Date of issue: 01.02.2015 Version: AK15-00

Product Name:

EU Directive 1907/2006

Performance ABS

3D PRINTING MATERIALS **Material Safety Data Sheet**

DO-KUMA

1. Identification of the substance/preparation and of the company/undertaking

1.1 Trade name: Performance ABS

1.2 Use of the product: 3D Printing Filament

1.3 Supplier: OOKUMA Additive Manufacturing Technologies and Materials,

Inc.

Atatürk Oto San. Sit. 2. Kısım 5. Sok. No:113

Maslak İST.

Phone: 0090 850 811 6781 Fax: 0090 850 811 6781

Emergency phone number: 0090 850 811 6781

Hazards identification

2.1 Classification: Not classified.

3. Composition / information on ingredients

3.1 Chemical Acrylonitrile /Butadiene/Styrene (>%99)

characteristics:

3.2 CAS no: ABS: 9003-56-9

3.3 Additional information: no harmful ingredients

4. First-aid measures

4.1 On skin contact: In case of contact with molten polymer rinse immediately

with plenty of water for at least 15 minutes. If skin

irritation persists, call a physician.

4.2 After inhalation: After inhalation of decomposition gases or dust Move to

fresh air. Call a physician immediately.

If swallowed, seek medical attention. May cause 4.3 On ingestion:

gastrointestinal blockage. Do not give laxatives. Do not induce vomiting unless directed to do so by medical

Rinse immediately with plenty of water, also under the 4.4 On eyes contact:

eyelids, for at least

15 minutes. Call a physician immediately.

Fire-fighting measures

5.3 Special protective

hazards:

equipment:

5.1 Suitable fire Foam. Water. Carbon dioxide (CO2). Dry chemical. Alcohol resistant foams are preferred if available. General-purpose extinguishing media:

synthetic foams (including AFFF) or protein foams may

function, but much less effectively

5.2 Special exposure During incomplete combustion release of Nitrogen oxides.

Carbon monoxide. Carbon dioxide. Combustion products may include trace amounts of: Styrene, Hydrogen cyanide.

As in any fire, wear self-contained breathing apparatus

pressure-demand and full protective gear.

5.4 Remark: Fine dust dispersed in air may ignite. Risks of ignition

followed by flame propagation or secondary explosions shall be prevented by avoiding accumulation of dust, e.g. on $% \left(1,...,n\right) =\left(1,...,n\right)$

floors and ledges.

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6. Accidental release measures

Use suitable protective clothing. Avoid eye contact and 6.1 Personal precautions:

inhalation of dusts. Keep ignition sources away.

6.2 Methods for cleaning Shovel into suitable container for disposal. Avoid ingress

of material into drainage systems. up:

7. Handling and storage

7.1 Handling: Avoid contact with molten polymer with skin and eyes. Avoid

dust formation. Low hazard for usual industrial or commercial handling. Use personal protective equipment

7.2 Storage: Store in cool place. Keep at temperatures below 50 °C.

No special restrictions on storage with other products.

Protect against moisture.

8. Exposure controls/ personal protection

With suitable ventilation the threshold limits assumably 8.1 Technical safety

will not be reached. Avoid electrostatic charge by use of measures:

grounding cables.

8.2 Personal safety Use adequate safety equipment as protective clothing,

equipment: eye protection glasses with side-shields, heat

protection gloves.

In case of dust formation wear mask with particle filter. No eating or drinking during working. 8.3 Work hygiene:

Avoid contact of hot material with the skin.

Avoid breathing dust and vapours.

9. Physical and chemical properties

9.1 Form: Filaments 9.2 Color: Pigmented 9.3 Odor: Odorless

9.4 Melting range: Not Determined

9.5 Oxidising properties: not self igniting / not flammable

not applicable 9.6 Explosions limits: $1.04 - 1.05 \text{ g/cm}^3$ 9.7 Density: 9.8 Solubility in water: Estimated negligible.

10. Stability and reactivity

10.1 Stability: Stable under recommended storage conditions

10.2 Conditions to be Avoid exposure to extreme heat and all sources of ignition.

avoided: Thermal decomposition > 300°C.

10.3 Substances to be

avoided:

Oxidizing agents, strong bases.

10.4 Hazardous Burning produces obnoxious and toxic fumes. Aldehydes.

decomposition products Carbon monoxide (CO). carbon dioxide (CO2).

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11. Toxicological information

11.1 Local irritation: May cause eye/skin irritation. Product dust may be

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irritating to eyes, skin and respiratory system. Caused mild to moderate conjuctival irritation in eye irritation studies using rabbits. Caused very mild redness in dermal irritation studies using rabbits (slightly irritating). Ingestion may cause gastrointestinal irritation, nausea,

vomiting and diarrhea.

11.2 Other remarks: Based on our state of knowledge and experience no

injurious health effects are expected if product is

properly handled for the designated use.

12. Ecological information

Not expected to be acutely toxic, but material in pellet 12.1 Ecotoxical effects:

or bead form may mechanically cause adverse effects if

ingested by waterfowl or aquatic life.

12.2 Biological This water-insoluble polymeric solid is expected to be degradation:

inert in the environment. Surface photodegradation is

expected with exposure to sunlight. No appreciable biodegradation is expected.

12.3 Bioaccumulation: Does not bioaccumulate.

13. Disposal considerations

13.1 Waste from residues

/ unused products :

In accordance with local and national regulations. Do not contaminate ponds, waterways or ditches with chemical or used container. Contact manufacturer.

13.2 Uncleaned packaging:

Packaging material has to be emptied completely and

disposed in accordance with the regulations.

Transport information

14.1 Transport Not classified as hazardous under transport regulations

regulations: ADR, ADNR, RID, ICAO/IATA, IMDG/GGVSee, ICAO/IATA

Regulatory information

15.1 EU regulations: This product does not require a hazard warning label in

accordance with EC Directives.

16. Other information

Oo-kuma urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M) SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

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